



Bio Base Europe Pilot Plant

Scaling the Future: Integrating AI
into a Pilot and Demonstration
Facility for the Bioeconomy

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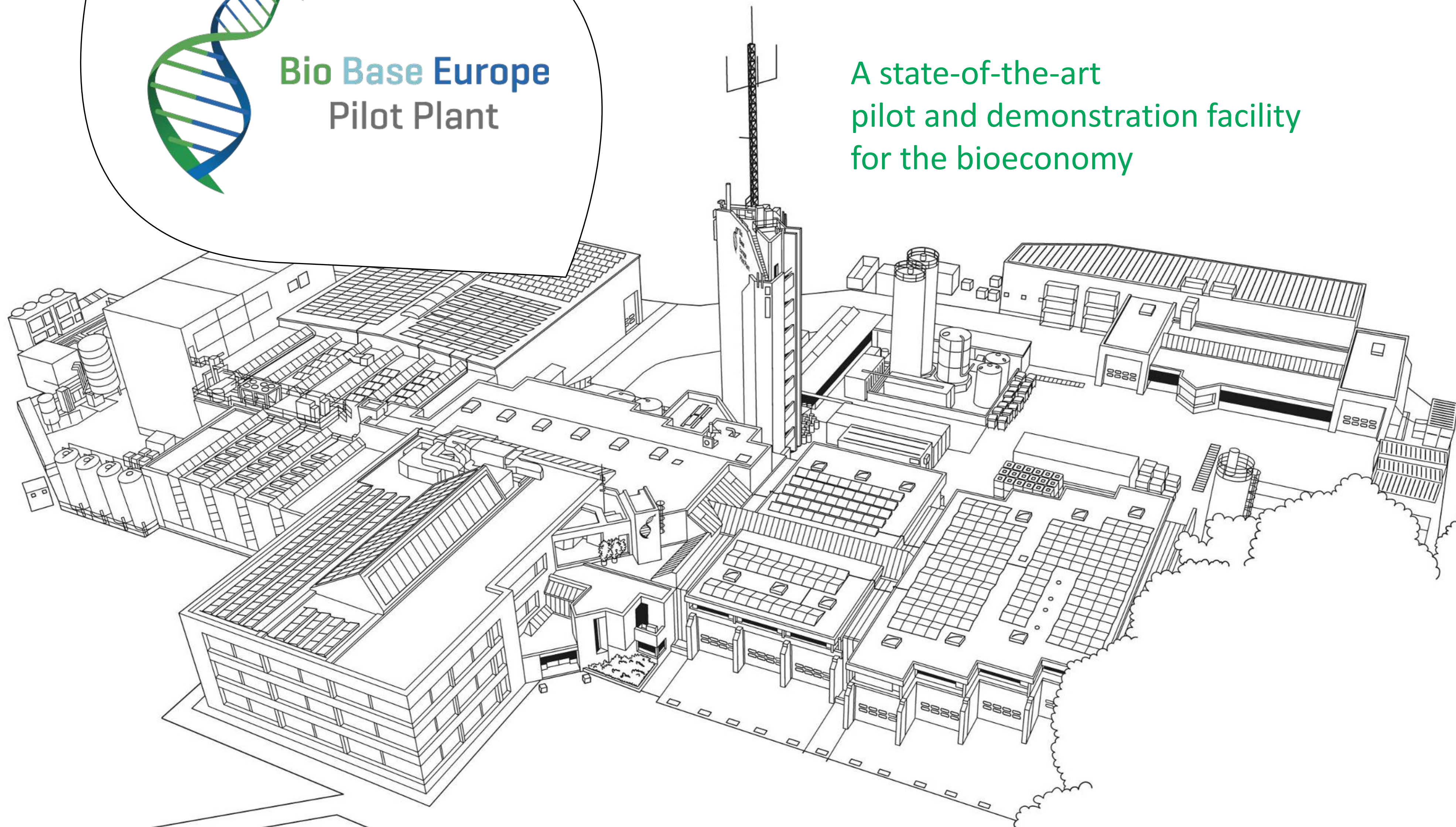
Project Acquisition Coordinator

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Bio Base Europe Pilot Plant

A state-of-the-art
pilot and demonstration facility
for the bioeconomy



2026 Key figures

2008
Founded

Fully independent,
no industrial
shareholders

25+ M€
Turnover

80+ M€
Investment in
infrastructure

61
Fermenters

160+
Enthusiastic employees

Quality labels:

ISO 9001 – FSSC 22000 – FDA-approved – ...



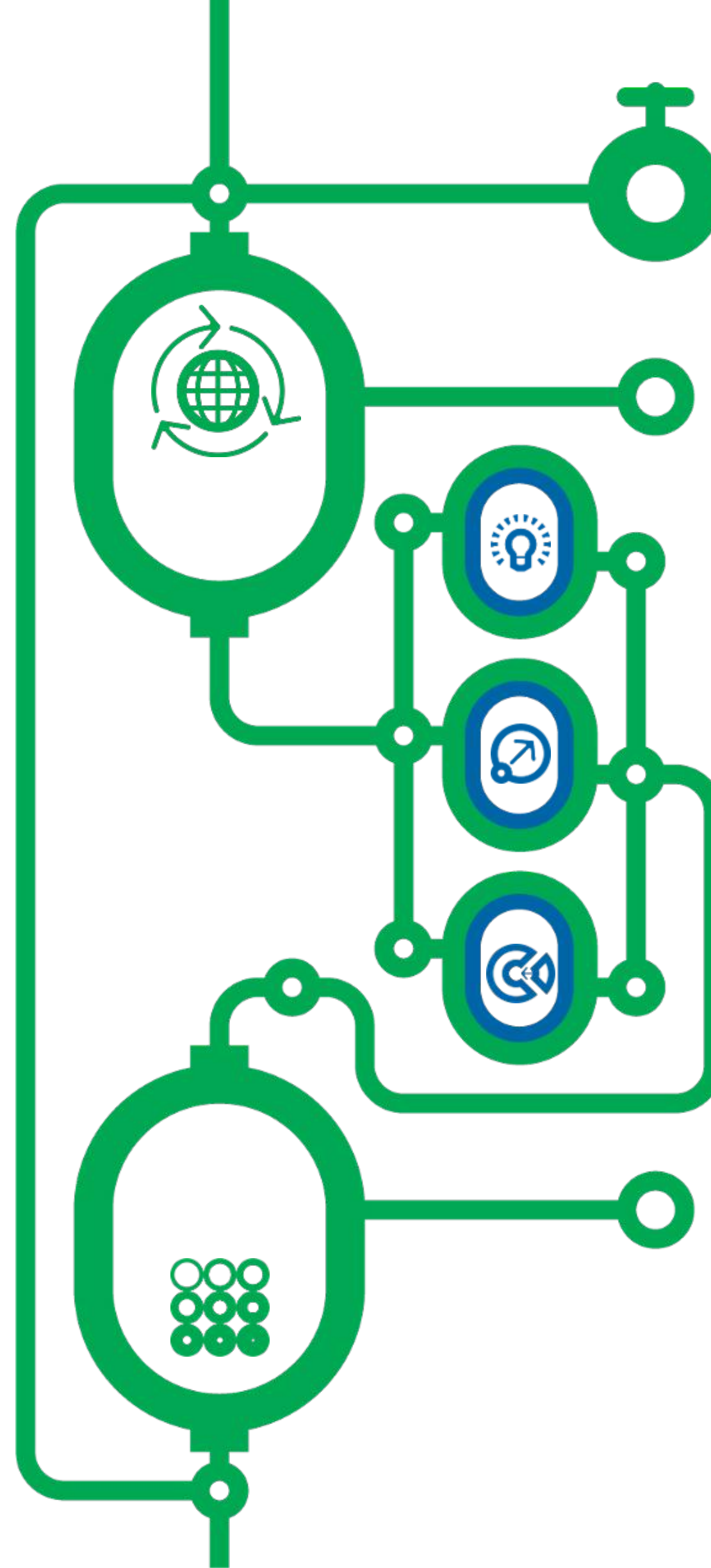
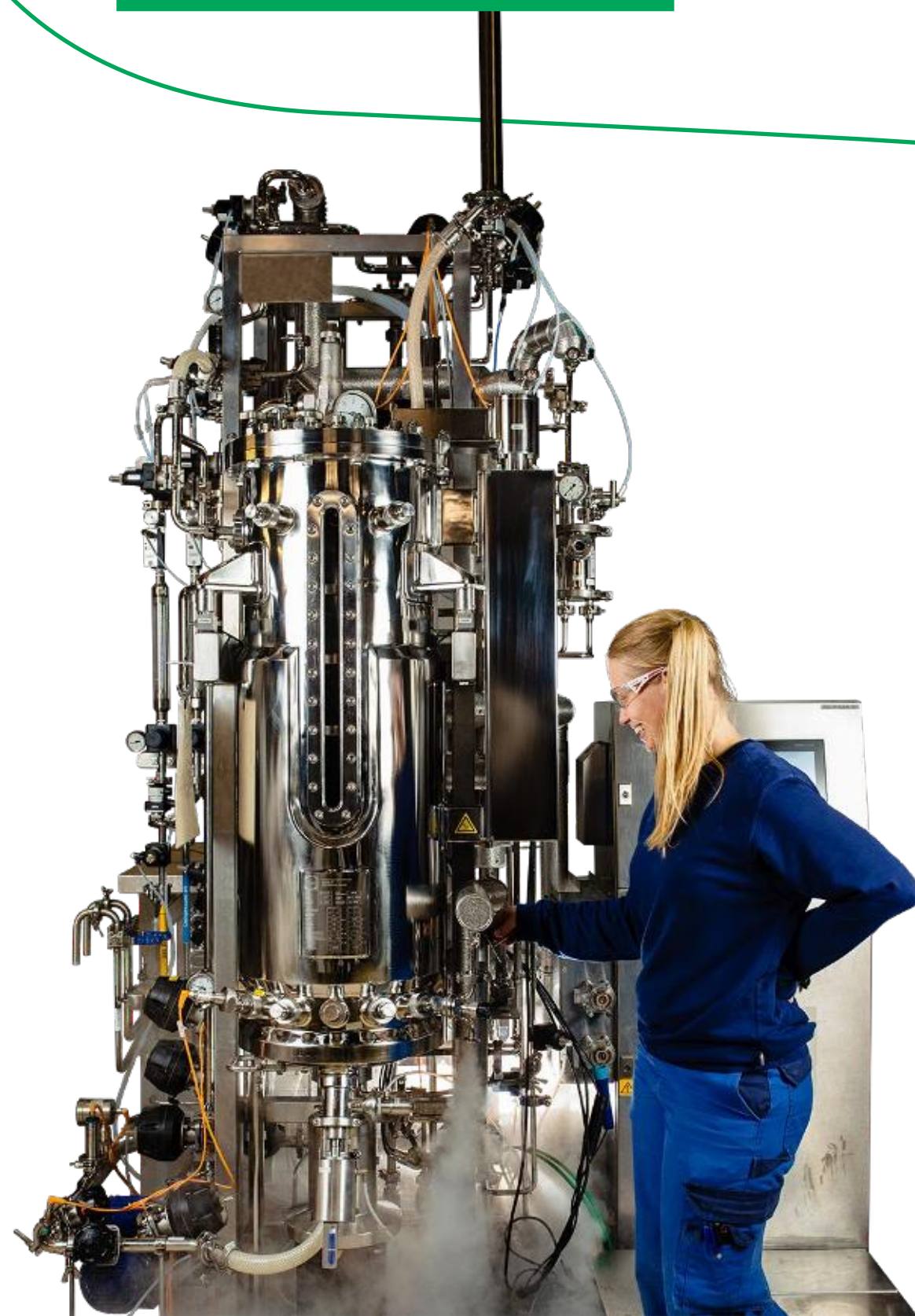
Home: Ghent, Belgium



What we do



Mission Statement



We enable
the transition

to a sustainable,
biobased economy

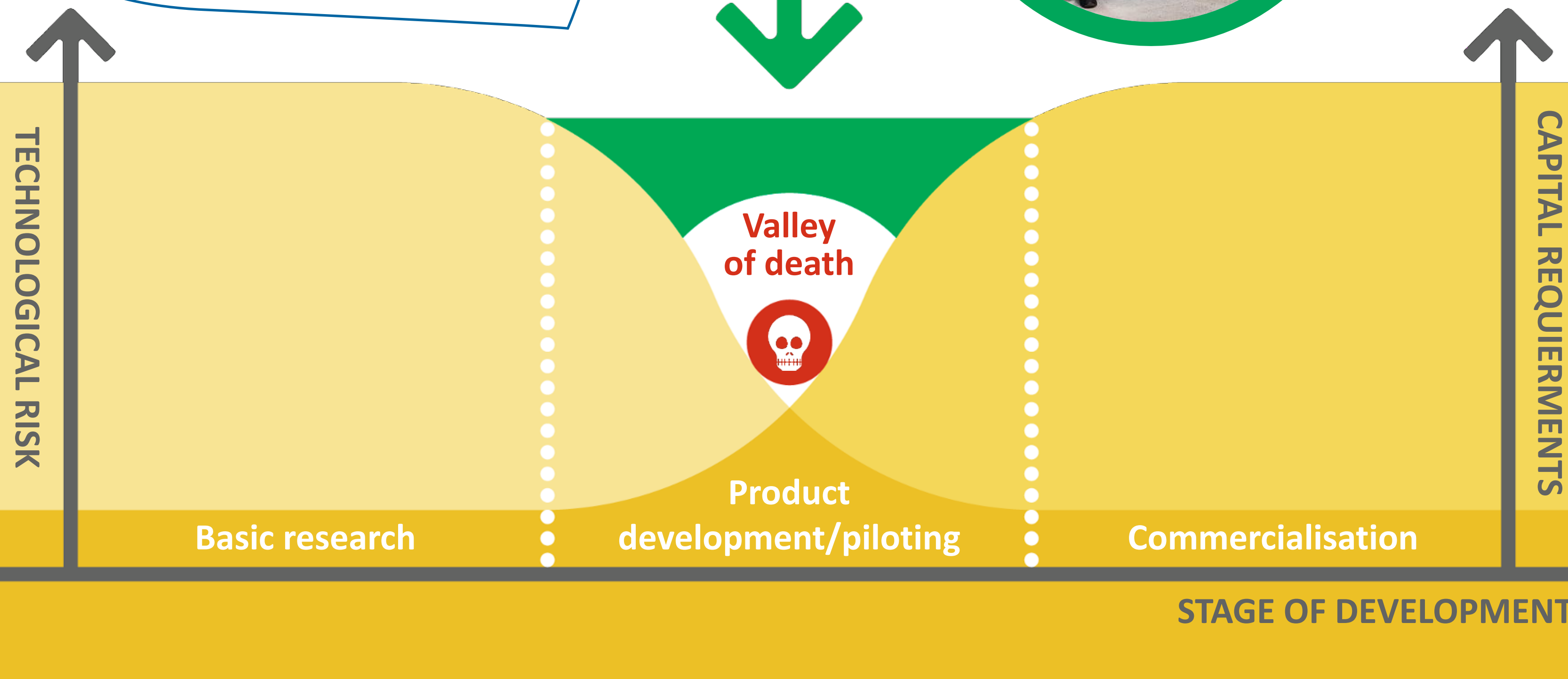
through
process development

through
scale-up

through
custom manufacturing

of biobased products
and processes

Bio Base Europe
Pilot Plant
helps bridging
the valley of death



Advantages of collaborating with a pilot plant

Better

Scale-up is our
CORE business

Cheaper

Lower
CAPEX/OPEX costs

Faster

Readily
available



Celtic Renewables
Grangemouth, Scotland
>40 million Euro



Enough
Sas v Gent, Netherlands
>80 million Euro



Meliora Bio (Comet)
Kalundburg, Denmark



Evonik
Slovenská Ľupča, Slovakia
>100 million euro



Arcelor Mittal, LanzaTech
Ghent, Belgium
>200 million Euro



BBEPP
scale up work
leveraged
investments in
European
biorefineries for
> 500 million euro



Arbiom, to be built
Lyon, France
> 40 million euro



TripleW
Amsterdam, Netherlands
Antwerp, Belgium

What we offer





Services



Laboratory

Scale-up

Scale-up

downscaling

downscaling

Factory



Process development

Cost Efficiency
Scalability
Sustainability

Technology Transfer
Development &
Optimisation
Proof of Concept



Scale-up

Economic Viability
Robustness
Efficiency & Sustainability
Demonstration

Industrial Equipment
Validation
Sample Production
Product Quality
Specs



Custom manufacturing

Demonstration
Market Introduction
Gain Production Experience
Prepare for Industrial
Production

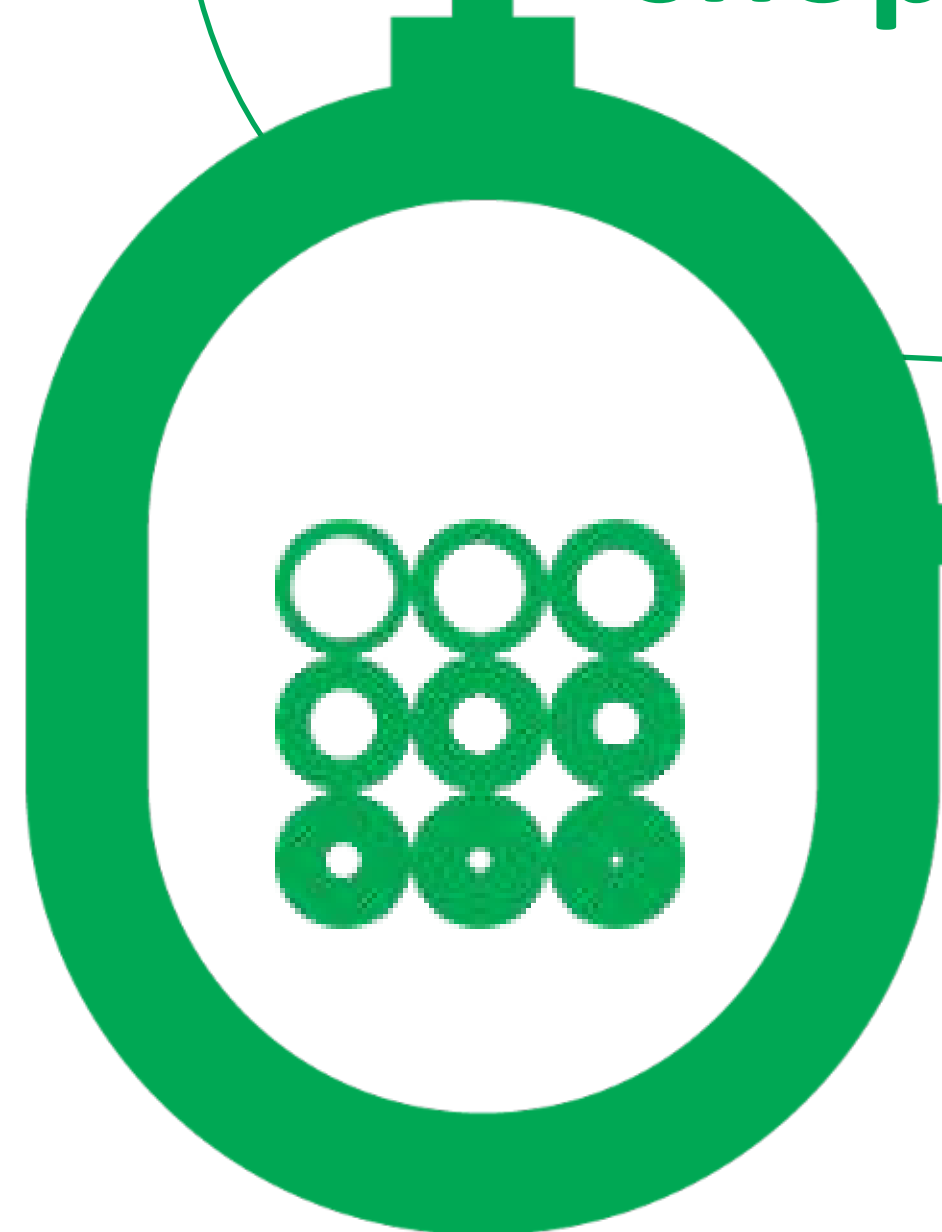
Production with
pre-industrial,
state-of-the-art
equipment



WHY?

HOW?

A one-stop-shop for ...



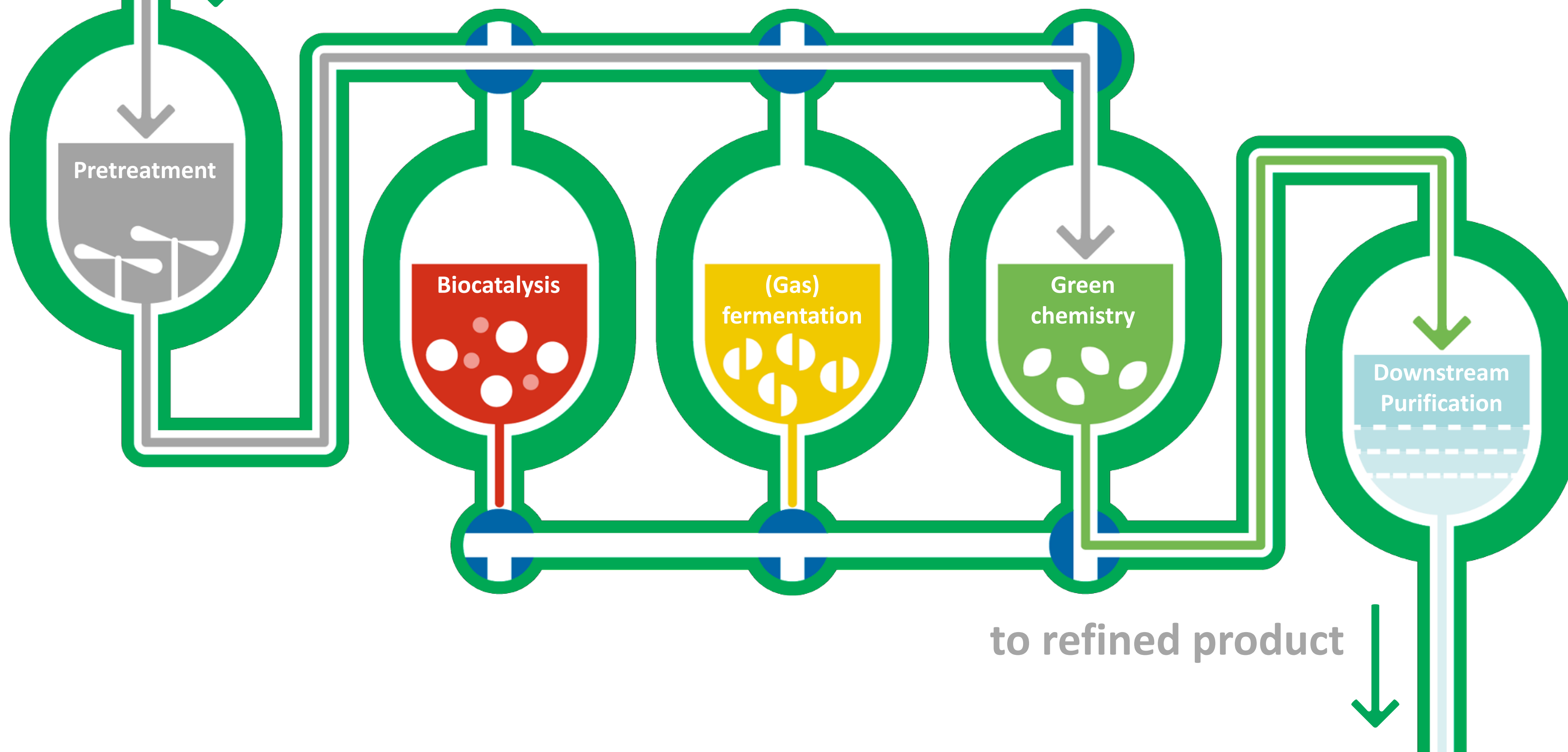
**Biobased processes
and products**



**from
biomass**

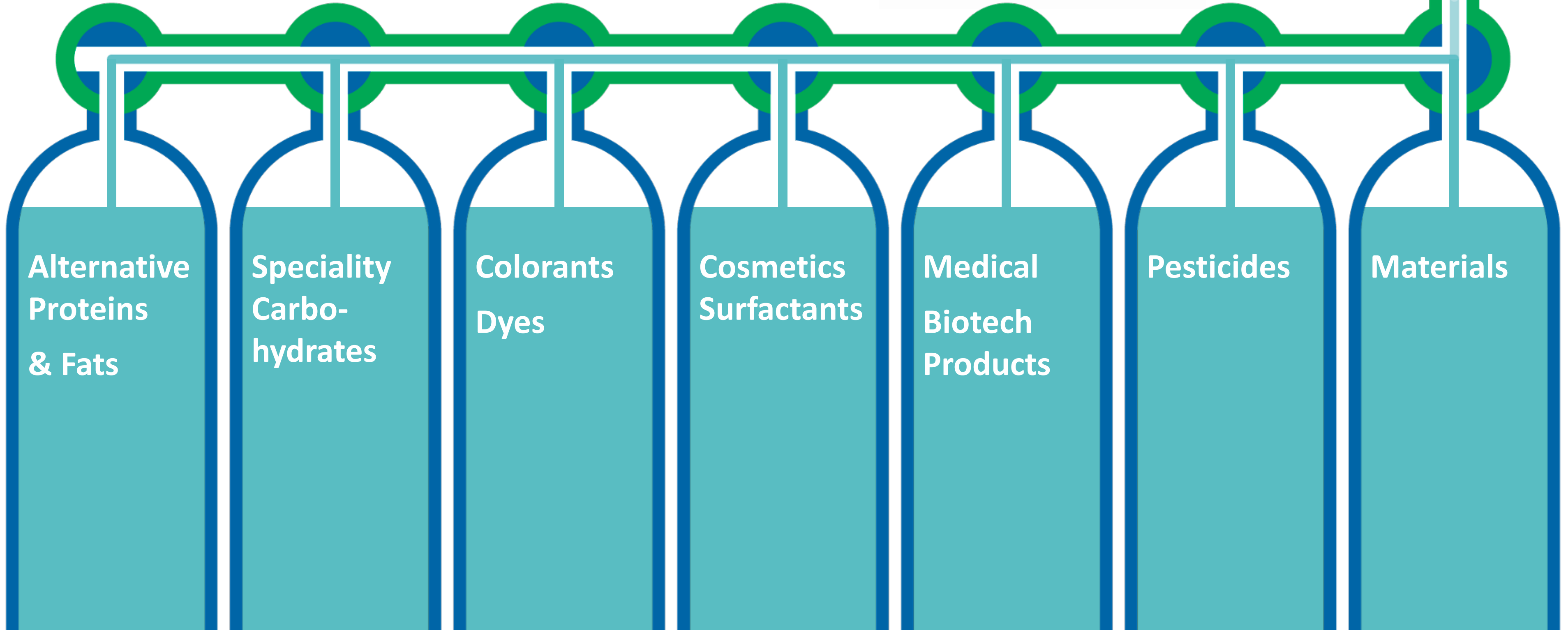


through our processes



to refined product

refined products



products & markets

Alternative proteins and fats



Biomass fermentation proteins
for food and feed applications



Mycoprotein for food applications



Feed applications



Fish feed applications

Precision fermentation
proteins: milk and egg proteins,
collagen...



Egg white



Milk



Collagen powder



products & markets

Speciality carbohydrates

Human milk sugars, low caloric sweeteners, prebiotics ...



Human milk sugars



Kojibiose



Prebiotics



Colorants & dyes

Blue, orange, red & yellow colorants and pigments



Red, orange & yellow colorants



Colorants & dyes in bakery products



Blue colorant in sport drinks



products & markets

Cosmetics

Cannabinoids, microbial cultures in cosmetic creams



Cannabinoids



Cosmetics



Creams

Biosurfactants

Biosurfactants in detergents and emulsifiers



Detergent ecover box by Waste2Func



Soap



Application fields of surfactants



products & markets

Materials

Bioplastics (PLA, PHA, PEF...)
Spider Silk
Vegan Leather



Bioplastics (PLA, PHA, PEF...)



Spider Silk



Vegan Leather – Mycotex by Neffa

Agtech

Biopesticides in the form of proteins
Microbial cultures
Biochemicals



Biopesticides - proteins



BioAI



BioAI & the Data Bottlenecks



Public projects



Funded by
the European Union



Waste (e.g. supermarket waste) to biosurfactants and lactic acid



Safe and sustainable by design microbial and lignin-based biosurfactants sourced from sustainable feedstock for home, personal care and agrochemical application



Circular initiative for recycling and waste conversion into lactate extracts



Safe and Sustainable by Design Plastics: Innovative recyclable elastomeric polymers. Production of enzymes for plastic waste depolymerisation into building blocks. Fermentative production of glutaric acid from paper & cardboard derived sugars, and cis,cis-muconic acid from lignin for further chemical conversion to C5- and C6-diacids and diols as building blocks.



BioAI & the Valley of Death



Advantages of predictive AI in a pilot plant

Better

Boost robustness of
processes

Cheaper

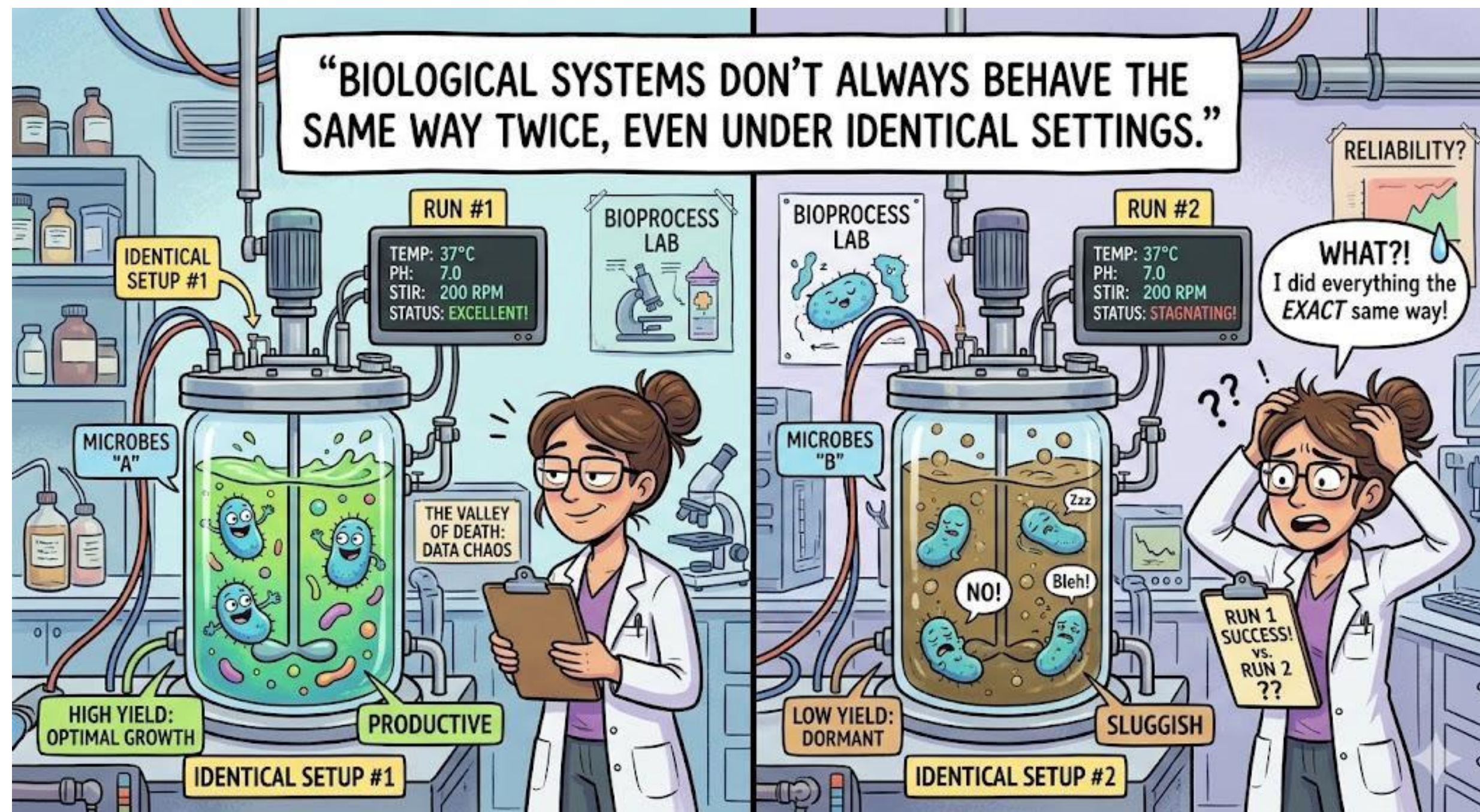
Reducing failures

Faster

Simulations defining
scale-up targets

BioAI & control and optimization





BioAI & sustainability



It's all
Teamwork

